

Application No. 09/307,195

Filed: May 7, 1999

TC Art Unit: 3625

Confirmation No.: 4520

AMENDMENT TO THE CLAIMS

What is claimed:

1. (Currently Amended) A surgical device for occluding an artery during a coronary bypass procedure comprising:
  - a retaining element having an aperture defining an operative site;
  - a flexible cord connector; and
  - a holder on the retaining element, the holder positioned to attach the flexible cord connector to the retaining element, the flexible cord connector being positioned by the holder to extend on a first side of an artery such that the flexible ~~cord~~ connector is held under tension by the holder to compress and occlude the artery against a surface on the retaining element that is positioned on a second side of the artery, the artery being compressed between the flexible cord connector and the surface of the retaining element at a first arterial position on a first side of the operative site and at a second arterial position on a second side of the operative site.
2. (Original) The surgical retractor of Claim 1 wherein the retaining element comprises a planar section surrounding the aperture.
3. (Original) The surgical retractor of Claim 1 further comprising a handle attached to the retaining element.
4. (Original) The surgical retractor of Claim 1 further comprising an irrigation channel in the retaining element.

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5. (Original) The surgical retractor of Claim 1 wherein the aperture comprises a longitudinal section, a first lateral section and a second lateral section.
6. (Previously Presented) The surgical retractor of Claim 5 further comprising a connector wherein the connector comprises a first cord, the first cord extending through the first lateral section, and a second cord extending through the second lateral section.
7. (Original) The surgical retractor of Claim 6 wherein the cord comprises flexible tape or thread.
8. (Original) The surgical retractor of Claim 1 wherein the retaining element comprises a compression surface that compresses an artery to control blood flow in the artery.
9. (Previously Presented) The surgical retractor of Claim 8 wherein the compression surface comprises a tab defining an aperture sidewall.
10. (Previously Presented) The surgical retractor of Claim 9 further comprising a connector wherein the connector extends through a first section of the aperture and a second section of the aperture such that the tab is positioned between the first section and the second section.
11. (Previously Presented) The surgical retractor of Claim 1 further comprising a suction tube attached to the retaining element retractor.

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12. (Previously Presented) The surgical retractor of Claim 1 wherein the holder comprises an opening that receives a portion of a connector.
13. (Previously Presented) The surgical retractor of Claim 12 wherein the holder further comprises a second opening that receives a second portion of a connector.
14. (Original) The surgical retractor of Claim 1 wherein the holder comprises a manually actuated fastener.
15. (Original) The surgical retractor of Claim 1 wherein the retaining element comprises a plurality of separable sections.
16. (Original) The surgical retractor of Claim 1 wherein the retaining element comprises a side opening in a base section extending into the aperture.
17. (Original) The surgical retractor of Claim 4 further comprising a plurality of fluid openings in fluid communication with the channel.
18. (Previously Presented) A method of positioning an artery during surgery comprising the steps of:  
positioning a retaining element at a surgical site, the retaining element having an aperture that exposes a portion of an artery at the surgical site; and  
occluding the artery at a first arterial position at a first side of the surgical site by compressing the artery between a connector and the retaining element and occluding the artery at a second arterial position at a second side of the surgical

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site by compressing the artery between a connector and the retaining element.

19. (Original) The method of Claim 18 further comprising connecting a flexible cord extending under the artery to a holder on the retaining element.
20. (Original) The method of Claim 18 further comprising positioning a surface of the retaining element against an interior surface of a rib.
21. (Original) The method of Claim 18 further comprising the step of suctioning fluid from the surgical site with a suction tube attached to the retaining element.
22. (Previously Presented) The method of Claim 19 wherein the connecting step further comprises attaching a cord extending through the tissue to a holder on the retaining element.
23. (Original) The method of Claim 18 further comprising providing a retaining element having a first plate and a second plate and removing the retaining element from the surgical site by separating the first plate from the second plate.
24. (Original) The method of Claim 19 further comprising occluding the artery at the surgical site by pressing the artery against the retaining element with the flexible cord.
25. (Previously Presented) A surgical retractor for occluding an artery during a coronary bypass procedure comprising:

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a retaining base having an aperture that exposes an operative site;

a holder on the retaining base; and

a flexible cord attached to the holder such that the flexible cord is held under tension by the holder to compress and occlude the artery that is positioned between the flexible cord that extends on a first side of the artery and the retaining base that is positioned on a second side of the artery and held stationary relative to the retaining base with the flexible cord.

26. (Original) The surgical retractor of Claim 25 wherein the retaining element comprises a planar base section surrounding the aperture.
27. (Previously Presented) The surgical retractor of Claim 25 further comprising a handle attached to the retaining base.
28. (Previously Presented) The surgical retractor of Claim 25 further comprising an irrigation channel in the retaining base.
29. (Original) The surgical retractor of Claim 25 wherein the aperture comprises a longitudinal section, a first lateral section and a second lateral section.
30. (Previously Presented) The surgical retractor of Claim 29 wherein the cord comprises a first cord, the first cord extending through the first lateral section, a second cord extending through the second lateral section.

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31. (Original) The surgical retractor of Claim 25 wherein the cord comprises flexible tape or thread.
32. (Previously Presented) The surgical retractor of Claim 25 wherein the retaining base comprises a compression surface on the cord holder that compresses an artery to control blood flow in the artery.
33. (Original) The surgical retractor of Claim 25 wherein the compression surface comprises a tab defining an aperture sidewall.
34. (Previously Presented). The surgical retractor of Claim 33 wherein the cord extends through a first section of the aperture and a second section of the aperture such that the tab is positioned between the first section and the second section.
35. (Previously Presented) The surgical retractor of Claim 25 further comprising a suction tube attached to the retaining element.
36. (Original) The surgical retractor of Claim 25 wherein the holder further comprises openings that received sections of the cord.
37. (Original) A method of positioning a coronary artery during bypass surgery comprising the steps of:  
positioning a plastic retaining base at a surgical site, the retaining base having a first element and a second element which surround an aperture that exposes the coronary artery at the surgical site;

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connection the coronary artery at the surgical site to the retaining base with a cord;

grafting a second artery onto the exposed coronary artery positioned in the aperture; and

separating the first element and the second element to remove the base from the site.

38. (Previously Presented) The method of Claim 37 wherein the connecting step comprises threading a flexible cord under the artery and connecting the cord to a holder on the retaining base, the holder comprising a manually actuated fastener.

39. (Original) The method of Claim 37 further comprising occluding blood flow in the coronary artery by compressing the artery against the retaining base.

40. (Original) The method of Claim 37 further including providing a cord comprising a tape or thread connected at two sections to the retaining base on opposite sides of the retainer.

41. (Previously Presented) A disposable surgical retractor for occluding an artery during a coronary bypass procedure comprising:

a plastic retaining base having an aperture that exposes an operative site, the aperture extending along a longitudinal axis of the base;

a plurality of holders on the retaining base such that a first holder is positioned on a first side of the aperture and a second holder is positioned on a second side of the aperture, the first holder and the second holder being positioned to attach a flexible cord to the retaining base such that the

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flexible cord is held under tension between the first holder and the second holder to compress and occlude a coronary artery positioned between the cord and a portion of the retaining base; and

an arm attached to the base and extending above the base such that a user can position the base at the operative site with the coronary artery exposed through the aperture.

42. (Previously Presented) The surgical retractor of Claim 41 wherein the retaining base comprises a planar base section surrounding the aperture.
43. (Previously Presented) The surgical retractor of Claim 41 further comprising an irrigation channel in the retaining base.
44. (Original) The surgical retractor of Claim 41 wherein the aperture comprises a longitudinal section, a first lateral section and a second lateral section.
45. (Previously Presented) The surgical retractor of Claim 44 further comprising a first cord, the first cord extending through the first lateral section, and a second cord extending through the second lateral section.
46. (Original) The surgical retractor of Claim 41 further comprising a cord held by the first holder and the second holder such that the cord extends through the base around a coronary artery.



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47. (Previously Presented) The surgical retractor of Claim 41 wherein the retaining base comprises a compression surface that compresses an artery to control blood flow in the artery.
48. (Previously Presented) The surgical retractor of Claim 47 wherein the compression surface comprises a tab defining an aperture sidewall.
49. (Original) The first retractor of Claim 48 wherein the cord extends between the holders through a first section of the aperture and a second section of the aperture such that the tab is positioned between the first and the second section.
50. (Previously Presented) The surgical retractor of Claim 41 further comprising a suction tube attached to the retaining base.